LEGISLATIVE GENERAL COUNSEL
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H.B. 393
1st Sub. (Buff)

Representative Joel Ferry proposes the following substitute bill:

WATER REPORTING AMENDMENTS

2022 GENERAL SESSION

STATE OF UTAH

Chief Sponsor: Joel Ferry

Senate Sponsor: _____

LONG TITLE

General Description:

This bill requires a study and makes changes regarding the use of electrolysis to create hydrogen from water.

Highlighted Provisions:

This bill:

- adds to the powers of the state engineer the power to conduct studies regarding use of water;
- requires the state engineer to conduct a study regarding:
  - the current effect on the water cycle of the use of water to cool power plants;
  - the potential effect on the water cycle of the use of water to create hydrogen through coal gasification or steam methane reforming; and
  - the potential effect on the water cycle of the use of electrolysis with water to create hydrogen to power a power plant;
- establishes a reporting requirement for the results of the study; and
- requires the state engineer to administer the river distribution accounting report.

Money Appropriated in this Bill:

This bill appropriates in fiscal year 2023:

- to the Division of Water Rights -- Water Rights Administration, as a one-time

appropriation:

- from the General Fund, One-time, $230,000.

▸ to the Division of Water Rights -- Water Rights Administration, as an ongoing appropriation:

- from the General Fund -- $150,000.

Other Special Clauses:

None

Utah Code Sections Affected:

AMENDS:

73-2-1, as last amended by Laws of Utah 2020, Chapters 60 and 352

ENACTS:

73-2-1.7, Utah Code Annotated 1953

73-5-17, Utah Code Annotated 1953

Be it enacted by the Legislature of the state of Utah:

Section 1. Section **73-2-1** is amended to read:

73-2-1. State engineer -- Term -- Powers and duties -- Qualification for duties.

(1) There shall be a state engineer.

(2) The state engineer shall:

(a) be appointed by the governor with the advice and consent of the Senate;

(b) hold office for the term of four years and until a successor is appointed; and

(c) have five years experience as a practical engineer or the theoretical knowledge, practical experience, and skill necessary for the position.

(3) (a) The state engineer shall be responsible for the general administrative supervision of the waters of the state and the measurement, appropriation, apportionment, and distribution of those waters.

(b) The state engineer may secure the equitable apportionment and distribution of the water according to the respective rights of appropriators.

(4) The state engineer shall make rules, in accordance with Title 63G, Chapter 3, Utah Administrative Rulemaking Act, consistent with the purposes and provisions of this title, regarding:

(a) reports of water right conveyances;

(b) the construction of water wells and the licensing of water well drillers;

(c) dam construction and safety;

(d) the alteration of natural streams;

(e) geothermal resource conservation;

(f) enforcement orders and the imposition of fines and penalties;

(g) the duty of water; and

(h) standards for written plans of a public water supplier that may be presented as evidence of reasonable future water requirements under Subsection 73-1-4(2)(f).

(5) The state engineer may make rules, in accordance with Title 63G, Chapter 3, Utah Administrative Rulemaking Act, consistent with the purposes and provisions of this title, governing:

(a) water distribution systems and water commissioners;

(b) water measurement and reporting;

(c) groundwater recharge and recovery;

(d) wastewater reuse;

(e) the form, content, and processing procedure for a claim under Section 73-5-13 to surface or underground water that is not represented by a certificate of appropriation;

(f) the form and content of a proof submitted to the state engineer under Section 73-3-16;

(g) the determination of water rights; or

(h) the form and content of applications and related documents, maps, and reports.

(6) The state engineer may bring suit in courts of competent jurisdiction to:

(a) enjoin the unlawful appropriation, diversion, and use of surface and underground water without first seeking redress through the administrative process;

(b) prevent theft, waste, loss, or pollution of surface and underground waters;

(c) enable the state engineer to carry out the duties of the state engineer's office; and

(d) enforce administrative orders and collect fines and penalties.

(7) The state engineer may:

(a) upon request from the board of trustees of an irrigation district under Title 17B, Chapter 2a, Part 5, Irrigation District Act, or another local district under Title 17B, Limited

Purpose Local Government Entities - Local Districts, or a special service district under Title 17D, Chapter 1, Special Service District Act, that operates an irrigation water system, cause a water survey to be made of the lands proposed to be annexed to the district in order to determine and allot the maximum amount of water that could be beneficially used on the land, with a separate survey and allotment being made for each 40-acre or smaller tract in separate ownership; and

(b) upon completion of the survey and allotment under Subsection (7)(a), file with the district board a return of the survey and report of the allotment.

(8) (a) The state engineer may establish water distribution systems and define the water distribution systems' boundaries.

(b) The water distribution systems shall be formed in a manner that:

(i) secures the best protection to the water claimants; and

(ii) is the most economical for the state to supervise.

(9) The state engineer may conduct studies of current and novel uses of water in the state.

Section 2. Section **73-2-1.7** is enacted to read:

73-2-1.7. Water for power study.

(1) As used in this section:

(a) "Coal gasification" means the process of using a gasifier to convert coal into synthesis gas which can then be converted to hydrogen.

(b) "Electrolysis" means the process of using electricity to split water into hydrogen and oxygen.

(c) "Steam methane reforming" means the process of chemical synthesis to use a catalyst to produce hydrogen from methane derived from natural gas.

(d) "Water cycle" means the biogeochemical cycle that describes the continuous movement of water on, above, and below the surface of the earth.

(2) The state engineer shall commission a study to determine the quantitative impacts to the state's water cycle from:

(a) electrolysis;

(b) the generation of electricity by burning as fuel hydrogen resulting from electrolysis; and

(c) the generation of electricity by burning as fuel a blend of natural gas and hydrogen.

(3) The study shall compare the quantitative impacts to the water cycle to generating electricity by:

(a) burning coal;

(b) burning natural gas;

(c) solar energy;

(d) wind energy;

(e) burning a combination of hydrogen and natural gas; and

(f) burning hydrogen produced from:

(i) electrolysis;

(ii) coal gasification; and

(iii) steam methane reforming.

(4) The impacts quantified in Subsections (3)(e) and (f) shall include the quantitative impacts to the water cycle of:

(a) burning the hydrogen; and

(b) producing the hydrogen from fuel through:

(i) electrolysis;

(ii) coal gasification; and

(iii) steam methane reforming.

(5) The study described in Subsection (3) shall describe factors that influence the findings described in Subsection (3), including efficiency of the power.

(6) The state engineer shall report the findings of the study described in Subsection (3) to the Public Utilities, Energy, and Technology Interim Committee and to the Legislative Water Development Commission on or before November 1, 2022.

Section 3. Section **73-5-17** is enacted to read:

73-5-17. River distribution accounting report.

(1) As used in this section:

(a) "Natural flow" means the computed amount of water available within a defined portion of a river system.

(b) "River system" means a portion of a natural stream and its tributaries where regulation and accounting are required.

(2) The state engineer may conduct a review of distribution and accounting procedures on a river system in the state.

(3) After conducting the review described in Subsection (2), the state engineer shall provide a report identifying:

(a) actively administered:

(i) water rights;

(ii) diversions; and

(iii) reservoirs;

(b) accounting practices, including:

(i) computation of natural flow;

(ii) apportionment of natural flow to individual water rights;

(iii) storage delivery and loss of storage;

(iv) accounting for imports and exports; and

(v) system losses including:

(A) conveyance losses; and

(B) reservoir losses;

(c) recommendations for:

(i) additional measurement and automation; and

(ii) refinement of distribution or accounting practices in accordance with:

(A) existing water rights;

(B) the prior appropriation doctrine; and

(C) relevant court decrees; and

(d) the data and computations relied upon to provide the information described in Subsections (3)(a) through (c).

(4) The state engineer shall make the report described in Subsection (3) available to the public on the Division of Water Rights website annually at least one week prior to the annual distribution system meeting.

Section 4. **Appropriation.**

The following sums of money are appropriated for the fiscal year beginning July 1, 2022, and ending June 30, 2023. These are additions to amounts previously appropriated for fiscal year 2023. Under the terms and conditions of Title 63J, Chapter 1, Budgetary Procedures

Act, the Legislature appropriates the following sums of money from the funds or accounts indicated for the use and support of the government of the state of Utah.

ITEM 1

To Division of Water Rights - Water Rights Administration

From General Fund, One-time			$230,000
Schedule of Programs:			
Water for Power Study	$150,000		
River Distribution Accounting Report	$80,000		
From General Fund			$150,000
Schedule of Programs:			
River Distribution Accounting Report	$150,000		